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The New England Journal of Medicine (New England Journal of Medicine 1991; 324, 727-33) recently published a study entitled "Video Display Terminals and the Risk of Spontaneous Abortion," conducted by the National Institute for Occupational Safety and Health (NIOSH). Concern about the health effects of occupational exposure to video display terminals (VDTs) was first raised in 1980 when adverse pregnancy outcomes were reported among working women who used VDTs. These women held jobs as computer attendants at a telephone company, airline reservationists, and toll operators. Subsequent studies showed inconclusive results or found no effect. These studies raised concerns regarding exposure to electromagnetic fields (EMFs) produced from the VDTs.

EMFs are created by the flow of electrical charges in an alternating current and are generated by anything powered by electricity. Hair dryers, kitchen appliances, and electric blankets are examples of everyday sources of EMFs. In the earlier studies, EMF exposure was determined by interviewing study subjects or by examining data on job titles, rather than by measuring EMFs produced by the VDTs. The NIOSH study is the first study to actually measure the level of EMFs produced by the VDTs.

The NIOSH study compared female directory assistance operators with general telephone operators at two telephone companies in the Southeastern States. The two groups of women were very similar with regard to age, race, education, number of pregnancies, and number of years employed by the telephone companies; however, only the directory assistance operators used VDTs in their jobs. Among 2,430 women who were interviewed, 730 had one or more pregnancies that were included in the study.

The rate of live births, miscarriages, and stillbirths did not differ between the directory assistance and general operators. The overall rates of miscarriage were 14.8 percent among VDT users and 15.9 percent among those that did not use VDTs. These percentages are well within the range reported as normal in the medical literature (11 to 20 percent). The rates of miscarriage did not increase with the number of hours of exposure to VDTs. NIOSH found that levels of EMF exposure due to VDTs did not differ from the levels of EMF exposure the directory assistance operators were exposed to at home.

This Health Bulletin is one in a series of routine publications issued by the Office of Health to share data from health studies throughout the DOE complex. This study was not funded by DOE and the authors' conclusions do not necessarily reflect those of the Department. For more information contact: Dr. Terry L. Thomas, Director, Health Coordination and Communication Division, Office of Epidemiology and Health Surveillance, U.S. Department of Energy, Washington, D.C. 20585; Telephone FTS 233-5328, Commercial (301) 353-5328.